

Claims

1. An anti reflux device comprising a valve arranged to allow unidirectional flow through the valve; and retention means adapted to enable the device to be secured to a wall of a human or animal stomach.
5
2. A device according to claim 1 wherein the valve is substantially flexible.
- 10 3. A device according to claim 1 or 2 wherein the valve is substantially collapsible.
4. A device according to any preceding claim wherein the valve comprises a mitral valve.
15
5. A device according to any preceding claim wherein the retention means comprises a flange disposed substantially circumferentially about the valve, which flange is adapted to enable the device to be secured to the stomach wall.
20
6. A device according to claim 5 wherein the flange is provided with an adhesive on a stomach contacting face of the flange.
- 25 7. A device according to claim 5 or 6 wherein the flange defines a conduit therein which is in fluid communication with the contacting face.
8. A device according to claim 7 wherein the fluid communication between the conduit and the contacting face is provided by a plurality of apertures in the flange.
30

9. A device according to any preceding claim wherein the device is substantially biodegradable.

10. A device according to any preceding claim wherein the valve is
5 adapted to permit the direction of the flow through the valve to be reversed when a predetermined threshold pressure within the stomach is reached.

11. An anti reflux system comprising a device according to any preceding claim; and positioning means adapted to position the device against the stomach wall while the device is being secured to said stomach wall.
10

12. A system according to claim 11 wherein the positioning means comprises a distensible element adapted to clamp the device between the stomach wall and the distensible element.
15

13. A system according to claim 12 wherein the positioning means comprises a tether detachably engageable with the distensible element, to allow the distensible element to be drawn against the stomach wall.

20 14. A system according to claim 12 or 13 wherein the distensible element is an inflatable balloon.

15. A system according to any of claims 11 to 15, when comprising the device according to any of claims 5 to 10, further comprising dispensing means
25 detachably connectable, in fluid communication, with the device, the dispensing means being operable to pump an adhesive onto the flange.

16. A system according to any of claims 11 to 16 further comprising insertion means adapted to facilitate the insertion of the device into the stomach.
30

17. A system according to claim 16 wherein the insertion means comprises an elongate tube adapted to receive the device, in a collapsed state, and from which tube the device may be dispensed into the stomach.

5 18. A method of treating gastroesophageal reflux comprising the steps of; locating a unidirectional flow valve device in the stomach of a human or animal; and securing the valve device to a wall of the stomach, about the oesophageal sphincter muscle, and in an orientation permitting the unidirectional flow through the valve into the stomach.

10

19. A method according to claim 17 comprising, in the step of locating the valve device in the stomach, collapsing the valve device and passing the valve device through the oesophagus and into the stomach.

15

20. A method according to claim 18 or 19 comprising, in the step of locating the valve device, collapsing the valve device about a distensible element, passing the valve device and the distensible element through the oesophagus and into the stomach, and distending the distensible element in order to deploy the valve device.

20

21. A method according to any of claims 18 to 20 comprising, in the step of securing the valve, providing an adhesive on a stomach wall contacting portion of the valve device, and urging the contacting portion against the stomach wall until the adhesive has substantially adhered to the stomach wall.

25

22. A method according to claim 20 or 21 comprising, in the step of securing the valve device, drawing the distensible element against the stomach wall following the distension thereof, and retaining the distensible element in said position until the valve device is substantially secured to the stomach wall.

30

23. A method according to any of claims 20 to 22 comprising, in the step of distending the distensible element, inflating the ~~distensible~~ element.

24. A method according to any of claims 21 to 23 comprising, in the step 5 of applying the adhesive, pumping the adhesive onto the contacting portion from outside the stomach.